

IN THE CLAIMS:

Please amend the claims as follows.

1-5. (Canceled)

6. (Currently Amended) The system as defined in claim ~~[[1]]~~51 wherein said controller is adapted to adjust said speed of rotation to provide a lay angle of said fibers corresponding to an axial position of said article within said winding station.

7. (Currently Amended) The system as defined in claim 6 further comprising an integrator coupled to said axial ~~motion-speed~~ sensor, said integrator adapted to generate a signal corresponding to said axial position.

8. (Original) The system as defined in claim 6 further comprising a proximity sensor for generating a signal corresponding to said axial position of said article.

9. (Original) The system as defined in claim 8 wherein said proximity sensor comprises a magnetic sensor.

10- 16. (Cancelled)

17. (Currently Amended) The system as defined in claim ~~[[12]]~~51 wherein said controllable force brake comprises a magnetic brake.

18-20. (Canceled)

21. (Currently Amended) The system as defined in claim ~~[[19]]~~51 wherein said resin is pumped into said chamber under pressure through said rotationally fixed inlet.

22. (Currently Amended) The system as defined in claim ~~[[1]]~~35 further comprising a pressure source arranged to charge ~~[[the]]~~an interior of said article, so that a cross-

sectional shape of said article is substantially maintained during winding said fibers on said article.

23. (Canceled)

24. (Currently Amended) The system as defined in claim ~~[[23]]~~51 wherein said torsional resonance detector comprises a current measuring circuit coupled to a motor adapted to rotate said winding station.

25-26. (Canceled)

27. (Currently Amended) The system as defined in claim ~~[[1]]~~51 further comprising an axial resonance detector adapted to detect resonance in axial motion of said article, said axial resonance detector coupled to said controller, said controller adapted to adjust at least one of said speed of rotation and a speed of axial motion when axial resonance is detected by said axial resonance detector.

28-29. (Canceled)

30. (Original) The system as defined in claim 27 wherein said axial resonance detector comprises said axial motion sensor.

31-34. (Canceled)

35. (Original) A system for winding fibers onto an article, comprising:

- a winding station having at least one fiber bobbin thereon;
- a conveyor adapted to move said article axially through said winding station; and
- a resin ring coupled to said winding station wherein said fibers are impregnated with resin prior to winding onto said article, said resin ring comprising a chamber sealed by an inflatable seal disposed where said fibers enter and leave said chamber, a

rotationally fixed inlet for said resin, and formed surfaces disposed inside said chamber to change a direction of travel of said fiber therethrough.

36. (Original) The system as defined in claim 35 wherein said resin is pumped into said chamber under pressure through said rotationally fixed inlet.

37-50. (Canceled)

51. (Original) A system for winding fibers onto an article, comprising:

- a winding station having a controllable speed of rotation, said winding station having at least one fiber bobbin thereon;

- a conveyor adapted to move said article axially through said winding station;

- a sensor adapted to measure axial speed of said article proximate to said winding station, said axial speed sensor comprising a wheel in frictional contact with said article coupled to a rotary encoder;

- a sensor adapted to measure said speed of rotation of said winding station, said rotational speed sensor comprising a rotary encoder rotationally coupled to a motor adapted to rotate said winding station;

- a controller adapted to adjust said speed of rotation of said winding station in response to output of said sensor adapted to measure said speed of rotation, said rotation speed sensor and said axial speed sensor operatively coupled to said controller, said adjustment to cause correspondence of said rotational speed with said measured axial speed to wind said fibers on said article in a helical pattern having a lay angle tolerance of about one-half degree;

- a resin ring coupled to said winding station adapted to apply resin to said fibers prior to winding on said article, said resin ring comprising a rotationally fixed inlet for said resin, an inflatable seal adapted to seal a fiber inlet and a fiber outlet of a chamber wherein said resin is applied to said fibers, said chamber having formed surfaces therein so that said fibers change directed as they pass through said chamber;

- a controllable force brake rotationally coupled to said bobbin, said brake

selectively operable to maintain a substantially constant tension on said fibers as said fibers are wound onto said article; and

a detector adapted to detect torsional resonance in said winding station coupled to said controller, said controller adapted to adjust said rotational speed of said winding station and said speed of axial motion of said article to avoid said torsional resonance.

52. (Currently Amended) ~~A system for winding fibers onto an article, comprising:~~
~~— a winding station having a controllable speed of rotation, said winding station having at least one fiber bobbin thereon;~~
~~— a conveyor adapted to move said article axially through said winding station; and~~
The system as defined in claim 35 further comprising an axial resonance
detector adapted to detect resonance in axial motion of said article through said system, said axial resonance detector and said conveyor coupled to a controller, said controller adapted to adjust an axial speed of motion of said article when axial resonance is detected.

53-54. (Canceled)

55. (Original) The system as defined in claim 52 wherein said axial resonance detector comprises an axial motion sensor operatively coupled to said article as it passes through said system.

56-60. (Canceled)